

# SEQUENCE LISTING

<110> Pavan, William J.  
 Loftus, Stacie K.  
 The Government of the United States of America  
 as represented by The Secretary of the  
 Department of Health and Human Services

<120> Alteration of RAB38 Function to Modulate Mammalian  
 Pigmentation

<130> 015280-148100US

<140> US 10/501,611  
 <141> 2004-07-14

<150> US 60/349,929  
 <151> 2002-01-18

<150> WO PCT/US03/01622  
 <151> 2003-01-17

<160> 28

<170> PatentIn Ver. 2.1

<210> 1  
 <211> 8  
 <212> DNA  
 <213> Mus musculus

<220>  
 <223> Rab38 sequence of wildtype allele in C57Bl6/J +/+  
 DNA

<400> 1  
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<210> 2  
 <211> 8  
 <212> DNA  
 <213> Mus musculus

<220>  
 <223> Rab38 sequence of chocolate (cht) mutant allele in  
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<400> 2  
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<210> 3  
 <211> 34  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <223> human RAB38 highly conserved N-terminal region

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8

<400> 3  
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Asp Leu Gly Val Gly Lys Thr Ser Ile Ile Lys Arg Tyr Val His Gln  
                   20                  25                  30

Asn Phe

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 <212> PRT  
 <213> Rattus norvegicus

<220>  
 <223> rat RAB38 highly conserved N-terminal region

<400> 4  
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Asp Leu Gly Val Gly Lys Thr Ser Ile Ile Lys Arg Tyr Val His Gln  
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Asn Phe

<210> 5  
 <211> 34  
 <212> PRT  
 <213> Mus musculus

<220>  
 <223> mouse RAB38 highly conserved N-terminal region

<400> 5  
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           1                  5                  10                  15

Asp Leu Gly Val Gly Lys Thr Ser Ile Ile Lys Arg Tyr Val His Gln  
                   20                  25                  30

Asn Phe

<210> 6  
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 <212> PRT  
 <213> Homo sapiens

<220>  
 <223> human RAB3a N-terminal region

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Gln Asn Phe Asp Tyr Met Phe Lys Ile Leu Ile Ile Gly Asn Ser Ser  
                   20                  25                  30

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<210> 7  
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 <212> PRT  
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<400> 7  
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Lys Ile Cys Gln Phe Lys Leu Val Leu Leu Gly Glu Ser Ala Val Gly  
                           20                          25                          30

Lys Ser Ser Leu Val Leu Arg Phe Val Lys Gly Gln Phe  
           35                          40                          45

<210> 8  
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 <212> PRT  
 <213> Homo sapiens

<220>  
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 <223> Rab38 cDNA

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 gatttggaag catgacaaga gtttattacc ggggaagctat gggggcattt attgtttttg 360  
 atgtcaccag accagccaca tttgaagccg tggcaaagtg gaaaaatgat ttggactcaa 420  
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<210> 10  
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 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> Rab38 exon 1 and surrounding intron sequence

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agctgctggt gatcggcgac ctgggtgtgg gcaagaccag cattatcaag cgctatgtgc 180
acaaaactt ctctcgcac taccgggcca ccattggtgt ggacttcgcy ctgaagggtgc 240
tccactggga ccagagacg gtggtgcgct tgcagctctg ggacattgct g 291

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<210> 11  
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 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> Rab38 exon 2

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ttgtttttga tgtcaccaga ccagccacat ttgaagccgt ggcaaagtgg aaaaatgatt 120
tggactcaaa gttaacgctc cctaattgga agccagtgtc agtggttctg ttggccaaca 180
aatgtgacca agggaaggat gtgcttatga acaatggact caagatggac cagttctgca 240
aggagcatgg ctctgtagga tggtttgaaa catcagccaa g 281

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<210> 12  
 <211> 868  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> Rab38 exon 3 and surrounding intron sequence

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<400> 12
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aaagaggaa agcaaattgt ctttatgtgt tttccacccc catcagcaca gtgttttaca 360
gcttttaaaa tattagtctg tcacaatatg ctgttttatc attgagcaaa gccactcagg 420

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gacacagaca gccctaatat ttgttccttt aaatcaacaa aggcttctgg tcttcttgag 480  
aaggggaata acagagcaag gcagagggtca agctaagtgt ggggatttgt cttgccctgg 540  
tgtgtctttg ttcaggatc aatttggtcc cgggtggtct gatagggtcta ttaaatagaa 600  
accattcatg gtagacctaa gggttgkctg tgatgtttct cttcagagtc gtgtgcacag 660  
gcagcctggg cttttgttgt cacttgctgt gccctgaatg ctggtttaac tgaaaactgt 720  
atggaaagat ctgctccctg tatgtgcctt tctttcagct tcctctgact caagctgcag 780  
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<210> 13  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:TYRP15'T3F

<400> 13  
gcgcgaatta accctcacta aagggtctga gcacccctgt cttct 45

<210> 14  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:TYRP15'T7R

<400> 14  
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<210> 15  
<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:MLSN R T7

<400> 15  
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<210> 16  
<211> 44  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:MLSN FT3

<400> 16  
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<210> 17  
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 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Description of Artificial Sequence:PCR  
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 <210> 18  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:PCR  
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 <210> 19  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Description of Artificial Sequence:PCR  
         amplification primer Rab38 Ex2F  
  
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 <210> 20  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Description of Artificial Sequence:PCR  
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 <400> 20  
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 <210> 21  
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 <220>  
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<400> 21  
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<210> 22  
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 <212> DNA  
 <213> Artificial Sequence

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 <223> Description of Artificial Sequence:PCR  
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<400> 22  
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<210> 23  
 <211> 21  
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 <223> Description of Artificial Sequence:amplification  
 primer cht Ex1F

<400> 23  
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<210> 24  
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 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:amplification  
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<400> 24  
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<210> 25  
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 <212> DNA  
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<220>  
 <223> Description of Artificial Sequence:PCR  
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<400> 25  
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<210> 26  
 <211> 51  
 <212> DNA  
 <213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence:PCR
      amplification att site linker primer
      AttB2-RRab-STP

<400> 26
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<210> 27
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<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:oligonucleotide
      complementary to segment of RAB38 mRNA translation
      initiation codon

<400> 27
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<220>
<223> human RAB38 DNA sequence

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